# IECEx Certificate of Conformity

## INTERNATIONAL ELECTROTECHNICAL COMMISSION
## IEC Certification Scheme for Explosive Atmospheres

for rules and details of the IECEx Scheme visit www.iecex.com

| | | |
|---|---|---|
| Certificate No.: | IECEx TUN 17.0019X issue No.:0 | Certificate history: |
| Status: | **Current** | |
| Date of Issue: | **2017-07-31** | Page 1 of 3 |
| Applicant: | **FAFNIR GmbH**<br>Schnackenburgallee 149 c<br>22525 Hamburg<br>**Germany** | |
| Equipment:<br>*Optional accessory:* | **Radio Transmitter VISY-RFT-L** | |
| Type of Protection: | **Intrinsic Safety** | |
| Marking: | Ex ia IIC T4 Ga | |
| *Approved for issue on behalf of the IECEx Certification Body:* | Andreas Meyer | |
| *Position:* | Head of Certification Body | |
| *Signature:*<br>*(for printed version)* | | |
| *Date:* | 2017-07-31 | |

1. This certificate and schedule may only be reproduced in full.
2. This certificate is not transferable and remains the property of the issuing body.
3. The Status and authenticity of this certificate may be verified by visiting the Official IECEx Website.

Certificate issued by:

**TÜV NORD CERT GmbH**
**Hanover Office**
**Am TÜV 1, 30519 Hannover**
**Germany**

# IECEx Certificate of Conformity

Certificate No.: IECEx TUN 17.0019X

Date of Issue: **2017-07-31** Issue No.: **0**



Manufacturer: **FAFNIR GmbH**
Schnackenburgallee 149 c
22525 Hamburg
**Germany**

Additional Manufacturing location(s):

This certificate is issued as verification that a sample(s), representative of production, was assessed and tested and found to comply with the IEC Standard list below and that the manufacturer's quality system, relating to the Ex products covered by this certificate, was assessed and found to comply with the IECEx Quality system requirements. This certificate is granted subject to the conditions as set out in IECEx Scheme Rules, IECEx 02 and Operational Documents as amended.

**STANDARDS:**
The electrical apparatus and any acceptable variations to it specified in the schedule of this certificate and the identified documents, was found to comply with the following standards:

| | |
|---|---|
| **IEC 60079-0 : 2011**<br>Edition: 6.0 | Explosive atmospheres - Part 0: General requirements |
| **IEC 60079-11 : 2011**<br>Edition: 6.0 | Explosive atmospheres - Part 11: Equipment protection by intrinsic safety "i" |

*This Certificate **does not** indicate compliance with electrical safety and performance requirements other than those expressly included in the Standards listed above.*

**TEST & ASSESSMENT REPORTS:**
*A sample(s) of the equipment listed has successfully met the examination and test requirements as recorded in*

Test Report:
DE/TUN/ExTR17.0018/00

Quality Assessment Report:

DE/TUN/QAR06.0013/05

# IECEx Certificate of Conformity

Certificate No.: IECEx TUN 17.0019X

Date of Issue: **2017-07-31** Issue No.: **0**



**Schedule**

**EQUIPMENT:**

*Equipment and systems covered by this certificate are as follows:*

The radio transmitter is used for transmitting data from the level measurement from the potential explosive atmosphere. The radio transmitter is operated with a replaceable battery pack.

| | |
|---|---|
| VISY-RFT-L | Radio transmitter |
| L0 | Battery pack with small capacity |
| L1 | Battery pack with medium capacity |
| L2 | Battery pack with large capacity |

For Technical Data see Attachment to IECEx TUN 17.0019X issue No.0

**SPECIFIC CONDITIONS OF USE: YES as shown below:**

The radio transmitter is built in a plastic enclosure. The risk of ignition by static electricity due to friction on the enclosure has to be avoided. The equipment shall be cleaned only with damp or antistatic cloth.

**Annex:** Attachment to IECEx TUN 17.0019X issue No.0.pdf

**TÜV NORD CERT GmbH**
**Hanover Office**
**Am TÜV 1**
**30519 Hannover**
**Germany**



## Temperatures

The permissible ambient temperature range is -40 °C to + 60 °C.

For EPL "Ga" application when potentially explosive atmosphere exists it must be considered the standard atmospheric conditions referring to temperature of -20 °C to +60 °C and pressure from 0.8 bar to 1.1 bar. If no potential explosive atmosphere exists, the devices may also be operated at the aforementioned permissible ambient temperature range.

## Electrical data

| | |
|---|---|
| Auxiliary power | Nominal voltage 3.6 V<br>from battery pack type L0, L1 or L2 from Co. FAFNIR GmbH |
| Sensor circuit<br>(terminals +, A, B, -) | in type of protection "Intrinsic Safety" Ex ia IIC/IIB<br>Maximum values:<br>$U_o$ = 7.8 V<br>$I_o$ = 59 mA<br>$P_o$ = 98 mW<br><br>Characteristic line: linear<br><br>$C_i$ negligibly small<br>$L_i$ negligibly small<br><br>The maximum permissible values for the external inductance ($L_o$) and capacitance ($C_o$) shall be taken from the following table: |

| | Ex ia IIC | | Ex ia IIB | |
|---|---|---|---|---|
| $L_o$ | 10 mH | 5 mH | 50 mH | 20 mH |
| $C_o$ | 0.69 µF | 0.95 µF | 2.6 µF | 4 µF |

The aforementioned maximum values of $L_o$ and $C_o$ consider the coincidental appearance of capacitance and inductance with the intention to allow the use of long connecting cables. When the radio transmitter is used in a potentially explosive atmosphere, the concentrated inductance of the connected sensor must not exceed a value of 90 µH for Group IIC respectively 390 µH for Group IIB.